AMENDMENTS TO THE CLAIMS

Upon entry of this amendment, the following listing of claims will replace all prior versions and listings of claims in the pending application.

IN THE CLAIMS

Please amend claims 1, 4-11, 15-16, 91, 22-29, 31-32, 34-35, 38-45, 49, 51 and 52, and add new claim 53 as follows:

1. (currently amended) A method for generating a report comprising:

defining a set of reporting components that can be assembled to form a report template, the reporting components being configurable to define one or more operations to perform within a technical computing environment, at least one of the reporting components configured to define an operation to bi-directionally communicate with a simulation of a model during an execution of the simulation; and

generating a report from processing the reporting components of the report template to initiate the reporting components to perform the one or more operations configured by the reporting components. ~~within a technical computing environment, said computing environment defining at least one simulation model~~; and

~~generating a report as a function of the processed reporting components.~~ , ~~said reporting components bi-directionally communicating with the computing environment, said bi-directional communication being possible during the simulation of said simulation model~~.

2. (original) The method of claim 1, wherein defining the set of reporting components includes defining flow control components that control an order for processing the reporting components.

3. (canceled)

4. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of issuing instructions to the computing environment to modify one of an operational parameters ~~or~~ and an initial conditions of the simulation of the model.

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5. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of reconfiguring the model by adding or removing a functional block from the model.

6. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of requesting data from a calculation workspace of the computing environment.

7. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of evaluating expressions defined within the computing environment.

8. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of requesting data from the simulation of the model during the execution of the simulation a simulator.

9. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of requesting data from a graphics package.

10. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of issuing commands to the computing environment to simulate the model.

11. (currently amended) The method of claim 1, wherein processing the reporting components includes initiating one of the reporting components configured to perform the operation of issuing commands to the simulation of the model simulator to advance a current state of the simulation model simulator by one or more time steps.

12. (original) The method of claim 1, wherein generating the report includes: generating an intermediate representation of the report; and transforming the intermediate representation into an electronic document according to a user-selected format.

13. (original) The method of claim 12, wherein generating an intermediate representation of the report includes generating a report in one of the following formats: Extensible Markup Language or Standard Generalized Markup Language.

14. (original) The method of claim 1, wherein generating the report includes formatting the report as a function of a state of the simulation.

15. (currently amended) The method of claim 1, wherein the reporting components can be hierarchically assembled to form the report template.

16. (currently amended) The method of claim 15, wherein processing the reporting components includes processing each reporting component according to a behavior defined by an ancestor reporting component within the hierarchy.

17. (original) The method of claim 1, wherein the reporting components are defined according to an object-oriented report programming language.

18. (original) The method of claim 1, wherein the report template refers to a second report template, and further wherein the reporting components are processed as a function of results from processing the second report template.

19. (currently amended) A report generation computer program, tangibly stored on a computer-readable medium, for generating a report from a model simulation, the computer program comprising instructions operable to cause a programmable processor to:

define a set of reporting components that can be assembled to form a report

template, the reporting components being configurable to define one or more

operations to perform within a technical computing environment, at least one of the

reporting components configured to define an operation to bi-directionally

communicate with a simulation of a model during an execution of the simulation; and

generate a report from processing ~~process~~ the reporting components of the

report template to initiate the reporting components to perform the one or more

operations configured by the reporting components. ~~within a technical computing~~

~~environment, said computing environment defining at least one simulation model~~

~~generate a report as a function of the processed reporting components. , said reporting~~

~~components bi-directionally communicating with the computing environment, said bi-~~

~~directional communication being possible during the simulation of said simulation model.~~

20. (original) The computer program product of claim 19, wherein the computer program

defines flow control components that control an order for processing the reporting

components.

21. (canceled)

22. (currently amended) The computer program product of claim 19, wherein the report

generation computer program initiates one of the reporting components configured to perform the

operation of issuing ~~issues~~ instructions to the computing environment to modify one of an

operational parameters ~~or~~ and an initial conditions of the model.

23. (currently amended) The computer program product of claim 19, wherein the report

generation computer program initiates one of the reporting components configured to perform the

operation of reconfiguring ~~reconfigures~~ the model by adding or removing a functional block from

the model.

24. (currently amended) The computer program product of claim 19, wherein the report

generation computer program initiates one of the reporting components configured to perform the

operation of requesting ~~requests~~ data from a calculation workspace of the computing environment.

25. (currently amended) The computer program product of claim 19, wherein the report generation computer program initiates one of the reporting components configured to perform the operation of evaluating ~~evaluates~~ expressions defined within the computing environment.

26. (currently amended) The computer program product of claim 19, wherein the report generation computer program initiates one of the reporting components configured to perform the operation of requesting ~~requests~~ data from the simulation of the model ~~simulator~~.

27. (currently amended) The computer program product of claim 19, wherein the report generation computer program initiates one of the reporting components configured to perform the operation of requesting ~~requests~~ data from a graphics package.

28. (currently amended) The computer program product of claim 19, wherein the report generation computer program initiates one of the reporting components configured to perform the operation of issuing ~~issues~~ commands to simulate the model.

29. (currently amended) The computer program product of claim 19, wherein the report generation computer program initiates one of the reporting components configured to perform the operation of issuing ~~issues~~ commands to the simulation of the model ~~a simulator~~ to advance a current state of the simulation ~~model~~ by one or more time steps.

30. (original) The computer program product of claim 19, wherein the report generation computer program generates an intermediate representation of the report and transforms the intermediate representation into an electronic document according to a user-selected format.

31. (currently amended) The computer program product of claim 19, wherein the report generation computer program formats the report as a function of a state of the simulation ~~simulator~~.

32. (currently amended) The computer program product of claim 19, wherein the report generation computer program <u>assembles the reporting components hierarchically in order to assemble</u> ~~can be hierarchically assembled to form~~ the report.

33. (previously presented) The computer program product of claim 19, wherein the reporting components generated by the report generation program_are defined according to an object-oriented report programming language.

34. (currently amended) The computer program product of claim 19, wherein the report generation computer program provides that the report template can reference on<u>e</u> or more other report templates in sequence, and further wherein the results of processing one of the report templates is a function of the simulation results from processing report templates earlier in the sequence.

35. (currently amended) A system comprising a technical computing environment, a model simulator and a report generator executing within an operating environment provided by a computer, ~~said operating environment defining at least one simulation model,~~ wherein the report generator defines a set of reporting components that can be assembled to form a report template, <u>the reporting components being configurable to define one or more operations to perform within a technical computing environment, at least one of the reporting components configured to define an operation to bi-directionally communicate with a simulation of a model during an execution of the simulation</u> ~~said reporting components in bi-directionally communication with the simulation model, said bi-directional communication being possible during the simulation of said simulation model~~, and further wherein

the report generator includes a generation engine to <u>generate a report from the processing of</u> ~~processes~~ the reporting components of the report template to <u>initiate the reporting components to perform the one or more operations configured by the reporting components.</u>

~~_extract data from the computing environment and the model simulator in order to generate a report.~~

36. (original) The system of claim 35, wherein the set of reporting components includes flow control components that control an order in which the generation engine processes the reporting components.

37. (canceled)

38. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to modify <u>one of</u> an operational parameters <s>or</s> <u>and</u> an initial conditions of the <u>simulation of the</u> model.

39. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to reconfigure the model by adding or removing a functional block from the model.

40. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to extract data from a calculation workspace of the computing environment.

41. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to evaluate expressions defined within the computing environment.

42. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to requesting data from the model simulator.

43. (currently amended) The system of claim 35, wherein the generation engine <u>initiates one of the reporting components configured to perform the operation of issuing</u> <s>issues</s> commands to the computing environment in order to request data from a graphics package.

44. (currently amended) The system of claim 35, wherein the generation engine initiates one of the reporting components configured to perform the operation of issuing issues commands to simulate the model.

45. (currently amended) The system of claim 35, wherein the generation engine initiates one of the reporting components configured to perform the operation of issuing issues commands to the simulation of the model to advance a current state of the simulation simulated model one or more time steps.

46. (original) The system of claim 35, wherein the generation engine generates the report in an intermediate representation, and wherein the report generator further comprises a transformation engine to transform the intermediate representation into an electronic document according to a user-selected format.

47. (original) The system of claim 46, wherein the intermediate representation of the report is in one of the following formats: Extensible Markup Language or Standard Generalized Markup Language.

48. (original) The system of claim 35, wherein the generation engine formats the report as a function of a state of the simulation.

49. (currently amended) The system of claim 35, wherein the generation engine initiates one of the reporting components configured to perform the operation of issuing instructions to the simulation of the model simulator to modify one of an operational parameters or and initial conditions of the simulation of the model.

50. (original) The system of claim 35 and further including a user interface by which a designer can hierarchically arrange the reporting elements to form the report template.

51. (currently amended)   The system of claim 35, wherein the report generator processes each reporting component according to behavior defined by an ancestor reporting component within a the hierarchy of reporting components.

52. (currently amended) The system of claim 35, wherein the report generator defines ~~said~~ the reporting components according to an object-oriented report programming language.

53. (new) A method for generating a report comprising:

defining a set of reporting components that can be assembled to form a report template, the reporting components being configurable to define one or more operations to perform within a technical computing environment;

generating a report from processing the reporting components of the report template to initiate the reporting components to perform the one or more operations configured by the reporting components; and

initiating, during generating the report, at least one reporting component to bi-directionally communicate with the simulation of the model during the execution of the simulation.